

CLAIMS

1. A device (12) for optically regenerating DM soliton pulses for use in optical propagation means comprising
5 first propagation means (10a) having abnormal dispersion and second propagation means (10b) having normal dispersion, said device comprising a synchronous intensity modulator (14) serving, when placed in the vicinity of the junction between the first and second
10 propagation means (10a, 10b), to perform time synchronization on DM soliton pulses passing through it and intensity fluctuation stabilization on said pulses, the device being characterized by the fact that it comprises noise suppression means (16) for suppressing
15 amplified spontaneous emission noise and that are distinct from the synchronous intensity modulator (14).

2. A device according to claim 1, in which the noise suppression means (16) comprise a saturable absorber.

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3. A device according to claim 1 or claim 2, in which the noise suppression means are disposed upstream from the synchronous intensity modulator (14) in the propagation direction of the DM soliton pulses when the device is
25 inserted in the propagation means.

4. An installation for optically transmitting DM soliton pulses, the installation comprising:

- propagation means (10) comprising first
30 propagation means (10a) having abnormal dispersion and second propagation means (10b) having normal dispersion; and

- a device for optically regenerating DM soliton pulses in accordance with any one of claims 1 to 3;
35 the synchronous intensity modulator (14) of the regenerator device (12) being installed in the vicinity

of the junction between the first and second propagation means.